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AUTHOR O'Rourke, B. T.
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ABSTRACT

The theoretical fields of adult developmental psychology and andragogy provide some principles or rules for action that may lead to useful improvements in course organization and teaching methodology. An analysis of the principles and the likely effects of their implementation has led to the following speculation: principles that are not likely to disrupt bureaucratic structures within distance education when applied are more likely to be accepted; principles viewed as being potentially disruptive to the power and professional exclusivity of the bureaucracies of administrators and teachers will almost certainly be rejected. Students would benefit from the application of the principles identified. Distance educators have demonstrated that they have the welfare of their students at heart. They must be willing to adopt and implement those outcomes of research that will almost certainly come into conflict with the standardizing, ordering, and controlling practices of the bureaucratic system. (YLB)

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NO. 2.

APPLICATION OF 'PRINCIPLES' OF ADULT DEVELOPMENT AND LEARNING TO DISTANCE EDUCATION.

B.T. O'Rourke, Visiting Senior Lecturer.

A discussion paper presented at a seminar in the Division of External Studies, University of Queensland, August 1981.

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The Director,
Division of External Studies,
University of Queensland,
ST. LUCIA. Q. 4067
AUSTRALIA.

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In this paper 'principles'[1] of adult development and learning are applied to teaching and organisational practices in distance education.

At one level, only minor changes are suggested as a result.

At another, the application of some accepted 'principles' appears to imply that very large alterations in guidance practices, course organisation, delivery mechanisms and student participation in curriculum design may, ideally, be called for.

Proposals of this latter kind would, however, seem to pose serious threats to the power of the bureaucracies of administrators and teachers.

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In the early 1960s the further development of tertiary education as a linear extension of the well established universal and compulsory, elementary and secondary systems seemed likely.

However, a variety of social and technological changes occuring at or about that time[2] gave impetus instead to the partial acceptance of an older[3] but now apparently more useful concept viz. that of lifelong education[4]. The necessity for job retraining in general and in particular for women who were re-entering the work force in numbers and, the increasing proportion of moderately well educated adults within the population were two of a variety of factors which in the developed countries necessitated that education be provided in recurrent forms[5]. In underdeveloped countries, pressing needs for skilled manpower produced the same outcome.

A 'philosophy' of lifelong education has since been evolved. Its major tenets suggest that something much more flexible than the extant linear system would now best serve the learning needs of people of all ages. The ideal characteristics of such a system are frequently described as follows:

* the education of children, youth and adults is integrated within a single system in which each part recognizes the goals of the others and contributes towards this attainment;

* the equalization of educational opportunity is complete at all levels of the system;

* the system ensures an adequate flow of skilled manpower for economic growth and is adapted to retaining;

* much attention is paid to the needs of the disadvantaged: indeed 'conscientization' is a fundamental part of the system;

* control, selection of content and method are 'democratized'[6].

Movement towards the instatement of a system with these characteristics has been piecemeal and erratic. At the tertiary level in Australia and New Zealand the concept of lifelong education has been treated warily by most members of the bureaucracies of teachers and administrators. But, where it has been seen to be to the advantage of an institution, limited numbers of mature or adult students have been permitted entry to internal courses and part time students have been tolerated with rather more enthusiasm than in the 1960s.

However, it has been in the field of distance education that concessions which seem to have gone beyond mere tokenism have been made to the concept of lifelong education. Already present as a marginal activity in several tertiary institutions within the regions, external study burgeoned rapidly during the 60s and 70s. To a limited extent the mode has helped to realize some of the goals of the ideal system of lifelong education mentioned above: it has helped equalize educational opportunities in areas where the 'tyranny of distance'[7] may often have prevented students from obtaining access to the kind of education which they required; through allowing for post-graduate study and retraining it has facilitated the flow of skilled manpower; finally, it has advantaged the disadvantaged, including as a common instance, housebound women.

At the tertiary level, distance education is far from becoming integrated within a single system and, in this connection appears to have drawn only minimally on the body of 'principles' of human development and learning upon which the methodology of teaching of children and adolescents is at least partly based. It has, as well, not yet moved more than tentatively along the road to 'democratization'.

In the preceding paragraphs the writer has gone to some lengths to describe the development of distance education within a general educational framework. It has been necessary to do this in order to provide a setting for an examination of the interplay between, on the one hand, what might at first glance seem to be the merely mechanical or 'nuts and bolts' application of 'principles' of development and learning to distance education and, on the other, the opportunities for and constraints upon development which are inherent in the tertiary learning institutions.

The theoretical fields of adult developmental psychology and andragogy are in their infancies; nevertheless it has been possible to draw from these areas of study some examples of 'principles' or 'rules for action' which would appear to offer practical pointers for useful improvements in course organisation

and teaching methodology. Some of these 'principles' are presented in tabular form below.

But, an analysis of the 'principles' and the likely effects of their implementation has led to the evolvement of a speculative thesis, the import of which bodes poorly for the harmonious integration of 'principles' and practice: it is argued that 'principles' of adult development and learning, which, when applied are not likely to disrupt bureaucratic structures within the distance teaching institutions or units are more likely to be accepted and implemented; other principles which are viewed as being potentially disruptive to the power and professional exclusivity of the bureaucracies of administrators and teachers will almost certainly be rejected or ignored.

The stand taken is based upon ideas promulgated in the field of the 'new sociology of education'[8] and in particular upon the recent work of Bates[9].

Bates has described the position of students in the schools as that of exploited clients: they are entrapped in a system in which, in order to gain '<u>cultural capital</u>'[10] they must submit to the control of administrative bureaucracies: bureaucratic schools provide a way of life in which the <u>"institutional structures overwhelm and subvert individual interests and purposes</u>"; on the other hand the growing <u>professionalism of teachers</u>, with its 'elaborate rituals' and 'esoteric ... theoretical knowledge' has demanded that the relationships between pupil and teacher be one of dependence and passivity.

Bates' arguments apply with rather more force when transferred to the tertiary system. There, over centuries, the universities (whose modus operandi the newer tertiary institutions and their distance educators have been quick to imitate) have brought to perfection a combination of formal bureaucratic strength with professional exclusivity and hence power. It seems likely then that in this setting, institutional structures will tend to 'overwhelm and subvert individual interests and purposes'. They will do this by excluding the possibility of applying 'principles' of development and learning to teaching practices where their application appears to be likely to threaten the uninterrupted continuation of the bureaucratic demense.

In an attempt to give substance to these ideas and to provide a basis for their more detailed examination, examples of 'principles' of adult development and learning have been arranged below in separate scales of increasing potential disruptiveness. In each table the first transverse line (x) suggests the level at which either teachers or administrators are likely to begin to block significant applications of a 'principle'. The second line (y) represents the level at which prophylactic action will almost certainly preclude any attempt

at application.

Examples of Principles

A. Development in Adulthood[11]	Application for Practice and Research
1. With increasing age the following senses become less effective:	
Vision	
Acuity and clarity decline; at 40+ presbyopia becomes common.	Use appropriate type-faces and format. Consider auditory input as an alternative. Stress need for adequate lighting.
Hearing	
Acuity declines; prebycusis develops.	Improve quality of audio tapes.
2. The tendency to become fatigued increases:	
Muscular fatigue may result from excessive desk work as may 'back' problems.	Reduce the required length of learning episodes and stress the need for 'armchair' working conditions at home or in study centres.
Concentration may be more difficult to maintain.	
	(x)
3. The nature of 'intelligence' changes with age:	
'Crystallized' or 'stored' intelligence replaces 'fluid' or 'pure' intelligence.	Create opportunities for students to use accumulated knowledge and learned thinking strategies.
4. Some intellectual functions decline absolutely:	Allow ample time for learning.
Speed of reasoning slows; short term memory becomes less efficient.	Eliminate timed examinations. Present information to be memorized in small, spaced units.
5. Differences between individuals increase across all parameters of development e.g. between convergent and divergent or dependent and independent thinkers.	Know students individually. Communicate at study centres or by telephone.
	Offer alternative learning activities along e.g. a sequence from structured to unstructured. Allow for idiosyncratic responses.
	(y)
6. Educational self-concept is variable:	
in relation to ageing itself and, as a result of	Tailor responses to students in terms of the likely + or -

previous education experiences.	nature of their educational self-concept. Distinguish between education sophisticated and education non-sophisticated students and treat accordingly e.g. by designing alternative courses.
7. Adults may be motivated towards learning by extra-psychic (i.e. societal) pressures which vary with age: roles job leisure They may also be motivated by intra-psychic pressures related to self development and/or periods of perturbation in the life cycle.	Create courses to accommodate educational needs of students resulting from extra- and intra psychic pressures (as opposed to courses based on the structures of academic disciplines): adjust content (where applicable), methods of learning and "packaging". Develop accessible, honest pre entry programmes.
B. Learning[12]	
1. From reinforcement theory (Skinner) That which is rewarded is learned. Feedback should be immediate and repeated intermittently. Mastery is intrinsically rewarding.	Reinforce learning with praise, marks, and encouraging statements, phone calls (etc), immediately. Maintain support. Develop multiple reward systems. Devise learning materials which are self-rewarding.
2. From information processing theory (Gagne) Learning may be divided into heirarchies of skills - the more complex are built on the simpler.	Devise logically progressive learning resources. Use higher order questions to facilitate information processing. Recognize the need to train some less sophisticated students in information processing skills.
(x)	
3. From 'discovery learning' theory (Bruner) That which is 'discovered' is learned. 'Process' is more important than 'product'.	Reduce 'telling'; increase research exercises. Take emphasis off examinable knowledge (product) and con-

	centrate on developing problem solving skills (process).
(y)	
4. From '<u>humanist</u>' learning theory (Rogers).	
Only self-directed learning is effective. The goal of learning is "self-actualization".	Recognize students personal goals; help them to work towards these. Abandon instruction for counselling. Adjust curriculum and delivery mechanisms to students needs by involving them in planning processes. Create a warm, accepting "climate" which allows students "freedom to learn".
5. From '<u>andragogy</u>' (Knowles).	
The characteristics of adult students determine the nature of the learning process:	
they are more self-directing and less dependent than children; they bring more experience and less naivety than adolescents to their studies; their motivation is less related to conventional academic pressures than to their changing vocational and social roles; they are problem or interest centred and accept the discipline or subject orientation of academics or teachers only because they have no alternative.	'Facilitate' rather than 'teach'. Encourage significant input from students. Reject conventional academic structures of knowledge and adjust curriculum to students' expressed educational needs.

An examination of the above tables suggests that if what is known about development and learning in adulthood is even approximately correct then students would be advantaged by the application of the 'principles' listed. Distance educators have demonstrated that they have the welfare of their students at heart: they have been prepared to risk ridicule and hostility from their internal colleagues by doggedly recognizing and compensating for problems of access to education: they have also conducted a variety of researches concerned with the processes of adult learning[13]. But their researches have dealt largely with the more mechanistic 'principles' of development and learning. Only a few in their inquiries have begun to fossick at the level at

which educational imperatives derived from the outcomes of research will almost certainly come into conflict with the standardizing, ordering and controlling practices of the bureaucratic system[14].

In the schools it has been a relatively simple matter to dispense with 'principles' of development and learning which stressed the needs and capacities of children to set personal learning goals and to facilitate their own learning: the immaturity and dependence of children of all ages was invoked as a reason for maintaining the power, position and mystique of educational administrators and school teachers. As knowledge of the characteristics of adult students increases it becomes more difficult to justify many educational and administrative practices in the tertiary system. At this level simple 'outs' are not available.

The distance education revolution is one which seems to have gone off 'half cocked'. Originally in the vanguard of beneficial changes, many distance educators now appear to be content to luxuriate and fatten in their established hegemonies. A few, having read their andragogical texts, are responding to the market with increased flexibility[15]. The views of the intransigent remainder are well summarized in the words of one writer, who notes with overtones of satisfaction that 'it is important to realize ... that university correspondence degree programmes need not distort the traditional patterns of university teaching'[16].

Those sharing this attitude might well ask themselves, why between, 30 and 60% of their students in each year do not show, or withdraw or fail their courses. Then, bearing in mind that the underlying conflict to be resolved is a simple one in principle if not in practice, they should get on to do something about it. As a result the ideal system of lifelong education described earlier in this paper might begin to become a reality.

NOTES AND REFERENCES

1. The term 'principle' has been used throughout as a convenient omnibus term to describe 'fundamental truths' (i.e. facts) or, laws derived from more general theories, which may serve as a guide to action.

2. A useful source of information about these changes is Taylor, W., "Into the Eighties", an unpublished paper presented at the Third Annual Community Education Conference, Melbourne 1979.

3. For an historical commentary see Yeaxlee, B.A., Lifelong Education, Cassell & Co., London 1929.

4. The concept is explained in detail in Educating the Whole Person - Towards a Total View of Lifelong Education, Australian Association of Adult Education, 1975.

5. Taylor in 2, explores this subject in depth. A brief summary is in O'Rourke B., 'The Role of the University of Otago in Continuing Education in the Region' in Continuing Education in New Zealand, 12:2, 1980, p. 4-5.

6. Adapted from Jones, H.A., 'A View of Adult Education in the 1980s'. Unpublished paper presented to the Annual Conference of Education Centres, Royal Holloway College, 1978.

7. From Blainey, G., The Tyranny of Distance, Sun Books, Melbourne 1966.

8. For an explanation of the term see Bates, R.J., 'The New Sociology of Education: Directions for Theory and Research' in The New Zealand Journal of Educational Studies, 13:1, 1978.

9. Bates, R.J., 'Bureaucracy, Professionalism and Knowledge: Structures of Authority and Sources of Control'. Unpublished paper presented to the National Conference of Professors of Educational Administration, Norfolk, Virginia, August 1980.

10. 'Cultural capital' is defined in precise, quantitative terms in Queensland where entry to teritary institutions of various 'grades' is based upon a cumulative 'score' (T.E.) which students acquire in the schools.

11. The 'principles' listed in 'A. Development in Adulthood' are discussed in full in such works as Bromley, D.B., The Psychology of Human Ageing, Pelican 1974; Troll, L., Early and Middle Adulthood, Brooks-Cole 1975 or Sheehy, Gail, Passages: Predictable Crises of Adult Life, Bantam 1976. A specific treatment of change in intellectual functioning during adulthood is in Brockhaus, B., 'The Changing Characteristics of Intelligence with Age' in Continuing Education in New Zealand, 13:1, 1981. Many of the 'applications' are examined in Rogers, J., Adults Learning, Open University Press, 1977.

12. The organisation of principles derived from learning theories under the heading 'B. Learning' is based upon the work of Sexton, M.T., 'Theories of Adult Learning' in Australian Journal of Adult Education, 20:2, 1980. Andragogy is defined in Goodsir, W., 'Knowles' Term 'Andragogy' and Its Implications for Adult Education in Australian Journal of Adult Education, 18:1, 1978.

13. For evidence of this see any issue of ASPESA Newsletter.

14. See for example the defense of the notion that 'external teaching is a transaction between equals' in Kitchen, R., 'The Quality of External Teaching - A Queensland Interpretation', Unpublished Paper, Division of External Studies, University of Queensland. Stanford, J.D., in a paper 'Recent Developments in Teaching Economics: the Substitution of Capital for Labour' (presented at a seminar at the University of Leicester, April 1980) argues a case for learner centredness and the use of 'alternative and substitutable techniques'. Morrison offers suggestions for countering 'institutional press' in 'The Adults Need for Self Directed Learning' in Continuing Education in New Zealand, 12:1, 1980.

15. Courses offered by e.g. the Goulburn College of Advanced Education, (The Australian July 15, 1981) illustrate this point.

16. Hunt, N., 'Extramural Studies at Massey University: Their Purpose and Function', Continuing Education in New Zealand, 13:1, 1981.

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